Javelin®

User's manual

J120i

JAVELIN

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Rev. A

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Quick Start

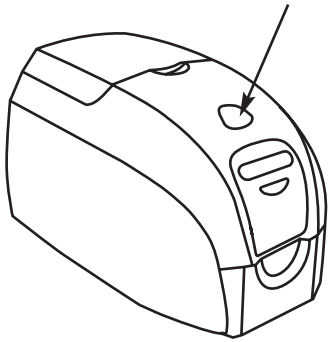
1. Unpack your Javelin card printer

Make sure the following items are included:

- **Power & USB cables**
- **Power Transformer**
- **Colour ribbon cartridge**
- **Quick Start guide**
- **Cleaning kit**
- **Drivers & documentation CD**

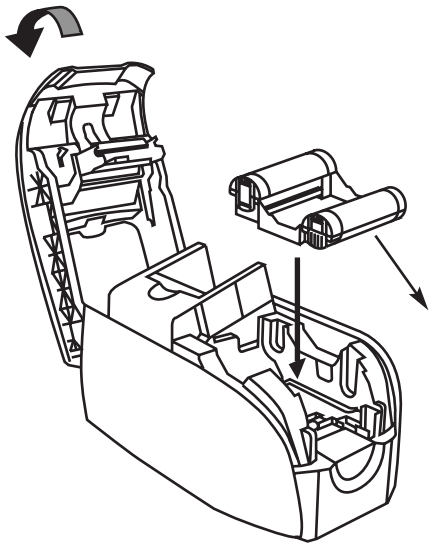
If any items are missing, please contact your dealer.

2. Open lid



Open printer lid by pressing the cover release button on the top of your printer.

3. Loading ribbon cartridge



Peel protective wrapper from adhesive cleaning roller by gently pulling on the tape.

Insert the ribbon cartridge with the cleaning roller facing down, so the gears on the ends of the rollers fit into the appropriate slots.

Close the printer lid and push down until you hear an audible click.

Place the printer power switch in the ON (I) position
- ribbon automatically synchronizes.

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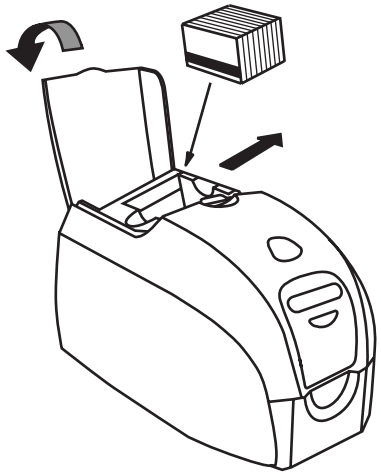
4. Loading cards



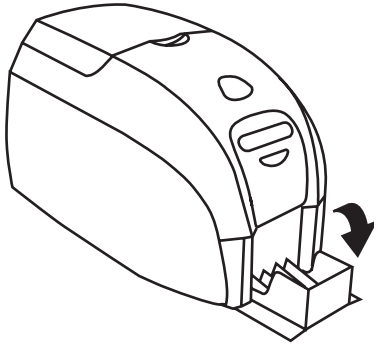
Open card feeder cover.

Slide card guide all the way to the right until it locks in place with an audible click.

Remove wrapper from card stack.

Place stack of up to 100 cards into the card feeder and close the cover.
When card feeder cover is closed, the card guide locking mechanism will automatically be released.

5. Preparing card output hopper



Raise the printer lid and rotate the hopper down.

Return hopper to its closed position when not in use.

6. Starting to print cards

Connect the interface cable, install the Windows driver on your PC and connect your printer when prompted.

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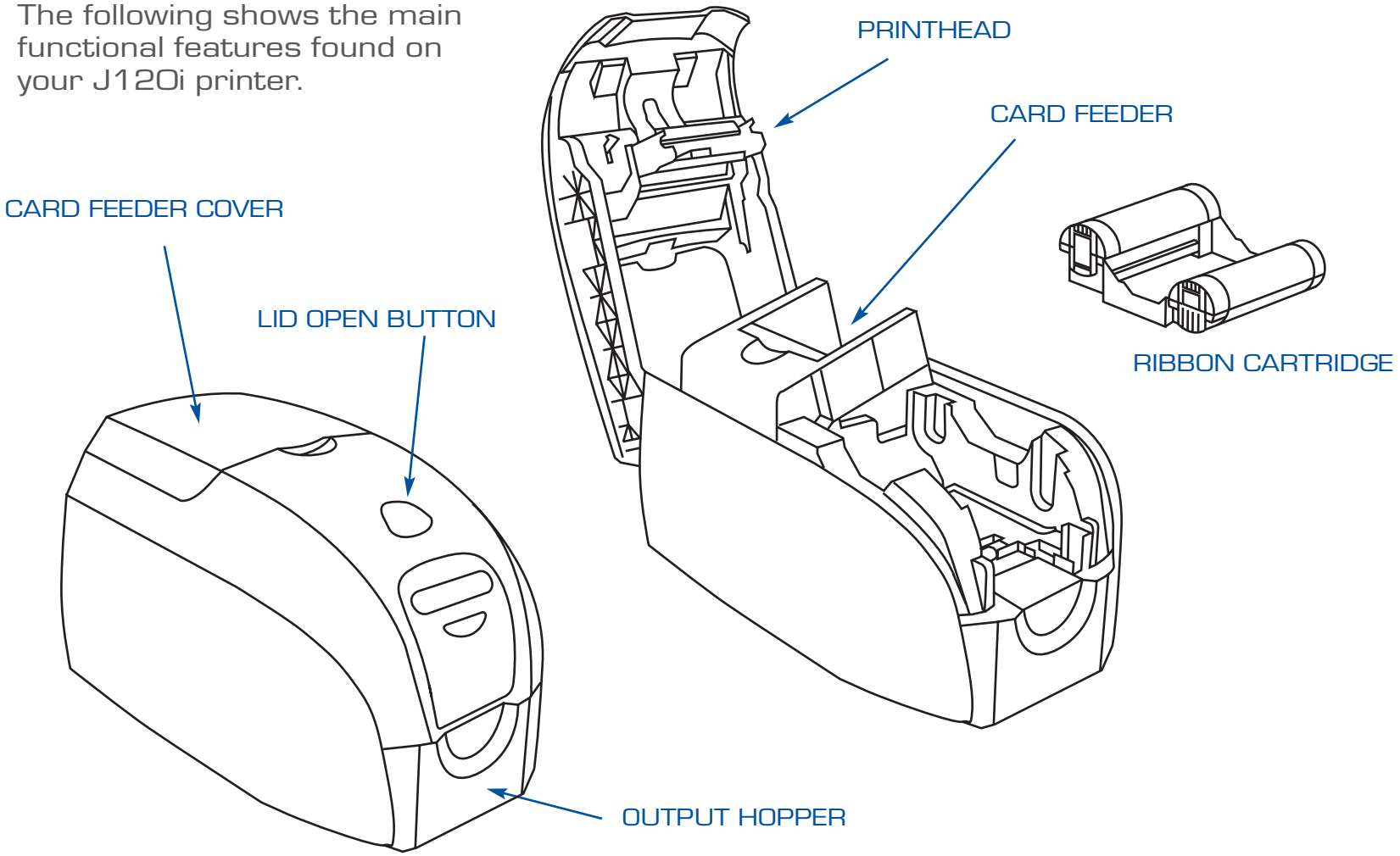
1 Introduction

Thank you for choosing the Javelin J120i dual sided card printer.
This manual guides you to efficient start up and operation of your new card printer.

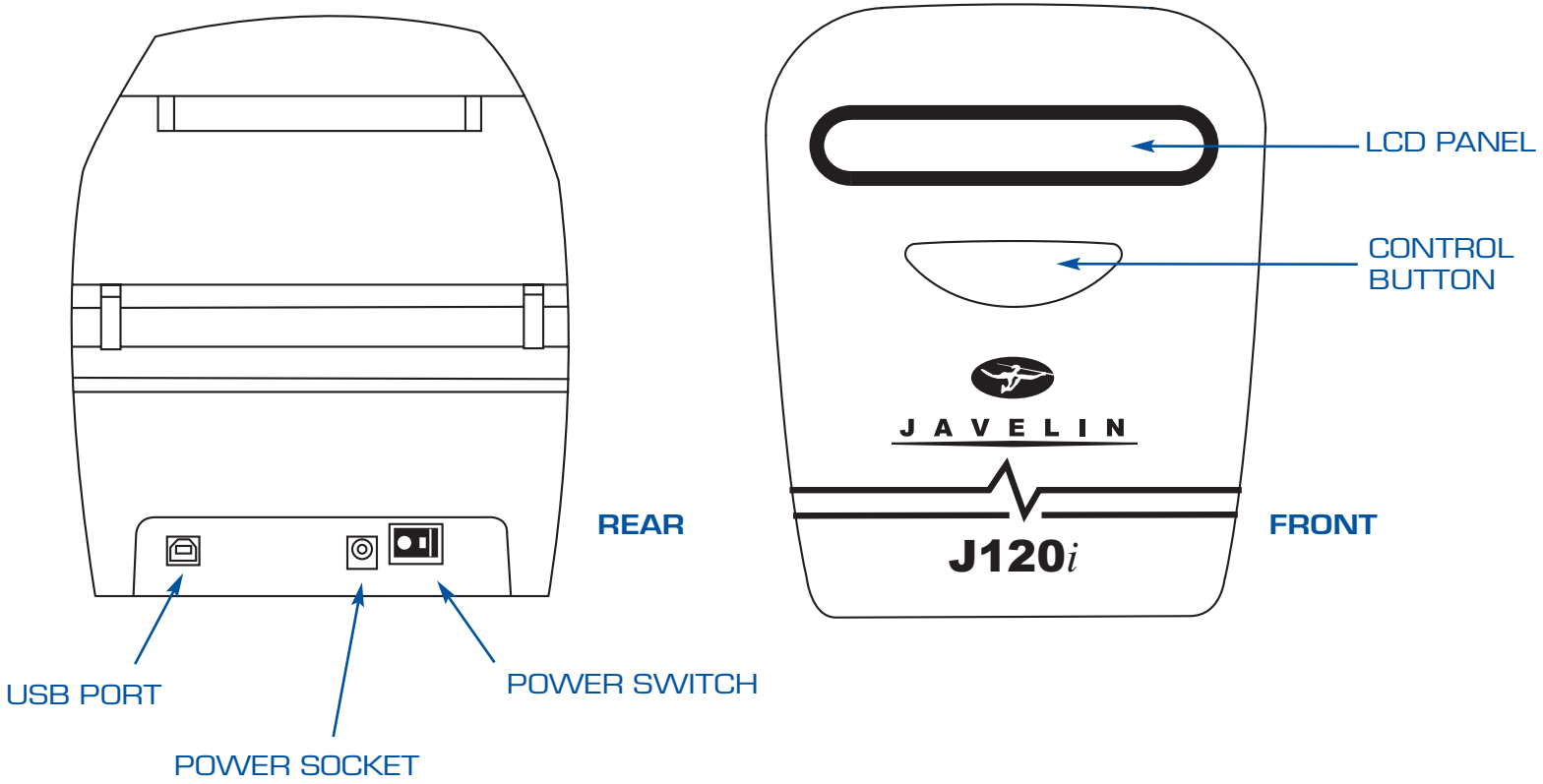
Printer Features

The following shows the main functional features found on your J120i printer.



Controls, Connectors, and Indicators

Your J120i Printer has an LCD display panel and a panel button on the front and a power connector, power switch, and USB port at the rear.



LCD Panel

The LCD panel can display the following messages:

Message	Mode
Operational:	
INITIALISING	Scrolling
READY	Fixed
DOWNLOADING DATA	Fixed
PRINTING MONO	Fixed
MAG ENCODING	Fixed
PRINTING CYAN	Fixed
PRINTING YELLOW	Fixed
PRINTING MAGENTA	Fixed
PRINTING BLACK	Fixed
PRINTING OVERLAY	Fixed
DOWNLOADING FW	Fixed
CLEANING PRINTER	Fixed
Warnings:	
CLEAN PRINTER	Fixed
REMOVE RIBBON THEN CLOSE HEAD	Scrolling
INSERT FEEDER CLEANING CARD	Scrolling
REMOVE FEEDER CARD	Scrolling
PRESS BUTTON TO CONTINUE	Scrolling
FEED LONG CLEANING CARD IN EXIT	Scrolling
CLEANING PRINTER	Scrolling
INVALID MAGNETIC DATA (encoding stops)	Scrolling
REMOVE RIBBON	Fixed
Errors (Printer will not operate):	
OUT OF RIBBON	Fixed
MECHANICAL ERROR	Fixed
OUT OF CARDS	Blinking
PRINTER OPEN	Blinking

2 Installation and Setup

General Information

This section will guide you through the installation and setup of your J120i card printer. This consists of the following procedures, which should be performed in the order presented.

Unpacking the printer
Installing the print driver software and setting driver options
Loading a ribbon
Installing the card cleaning cartridge
Setting the card thickness control
Loading cards
Connecting the printer to your computer
Connecting power
Printing a test card to verify printer operation

The printer should be placed in a location that allows easy access to all sides.

The printer should never be operated while resting on its side or upside down.

Electric Shock Caution: Limit AC power supplied to the J120i printer to 110 ~ 230 volts, 60 ~ 50 Hertz. Limit excess current draw to 16 amps or less, using an associated circuit breaker or other such device.
Never operate the printer in a location where operator, computer, or printer can get wet. Personal injury could result.
The printer must be connected to an earthed electrical power source and properly protected against electrical surges and grounding faults; the electrical reliability of the printer is based on the reliability of the mains power source and with the earth connection. The printer's power supply is an internal unit that can only be serviced or replaced by trained and authorised personnel.

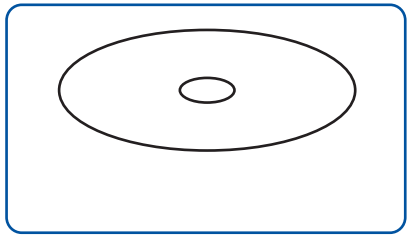
Unpacking the Printer

Your J120i card printer ships in a carton and protective anti-static bag.
Keep all packaging material in case you need to move or reship the printer.

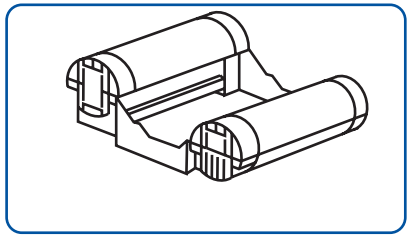
Inspect the shipping container to ensure that no damage has occurred during shipment.
If any damage is apparent, file a claim with the shipper.

Please ensure that you have a clean and nearly dust free environment for proper operation and storage of the printer.

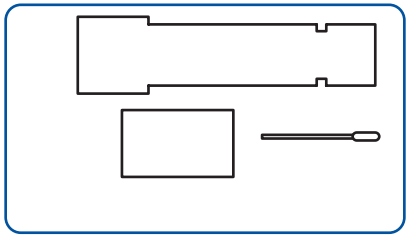
Make sure the following items are included with your J120i printer:



Drivers & documentation CD

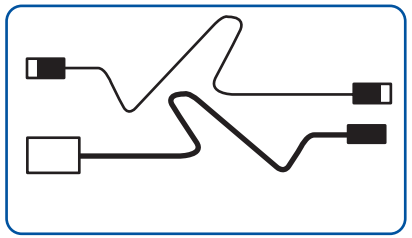


Ribbon cartridge

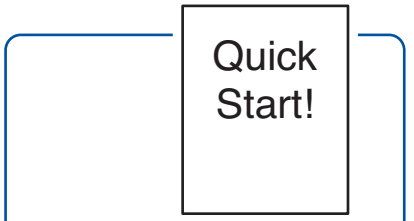


Cleaning kit

Transformer



Power & USB cables



Quick start guide

If any items are missing, please contact your dealer.

Installing the print driver software and setting driver options

Printing with the J120i printer requires the Windows printer driver and your card design/issuing software or printer command level programming through the printer interface.

The J120i card printer can be used with any Windows 2000 or Windows XP computer, using the drivers provided on CD with the printer.

This section contains information on the printing of a sample card in colour (using the 5-panel colour ribbon YMCKO and the Windows printer driver).

Note: If updating the printer driver from a previous version, before installing the updated printer driver version, always delete the existing version from your computer.

Installing the J120i print driver

To install the J120i printer driver automatically on all operating systems, use the Javelin Install Wizard.

Note: Ensure that you have administrative privileges to perform this installation, or contact your IT department.

The Install Wizard will walk you through the appropriate installation steps. The Wizard will:

Automatically launch when the driver CD is inserted.

From the main menu of your documentation CD, select your desired language and then select "DRIVERS" from the subsequent menu. The Install Wizard will walk you through the appropriate steps.

Delete previous versions of the driver and clean up any necessary registry entries. You must select "Remove" from the install options to remove any previous driver versions.

Loading Ribbon Cartridge

The J120i printer requires approved ribbon cartridges (see appendix C). The resin thermal transfer and dye sublimation ribbons are specifically designed for your J120i Printer.

Note: i series printers require the use of i series ribbons for full colour printing.
Each ribbon cartridge includes an integrated adhesive cleaning roller assembly that is used to clean the cards entering the printer. Improper cleaning will reduce printer life and degrade print quality.
When the ribbon is completely used, change the whole cartridge assembly.

1. Place the printer power switch in the OFF (O) position.

Electrostatic discharge caution:
DO NOT TOUCH the printhead or the electronic components on the printhead.
Discharge of electrostatic charge from the human body or other surfaces can damage the printhead or other electronic components

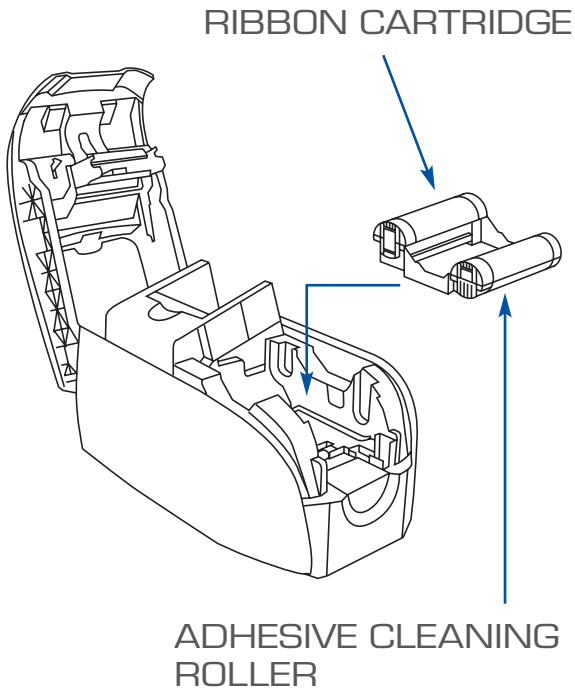
2. Open printer lid by pressing the cover release button on the top of your printer.

3. Peel protective wrapper from adhesive cleaning roller by gently pulling on the tape.

4. Insert the ribbon cartridge with the cleaning roller facing down, so the gears on the ends of the rollers fit into the appropriate slots.

5. Close the printer lid and push down until you hear an audible click.

6. Place the printer power switch in the ON (I) position - ribbon automatically synchronizes.



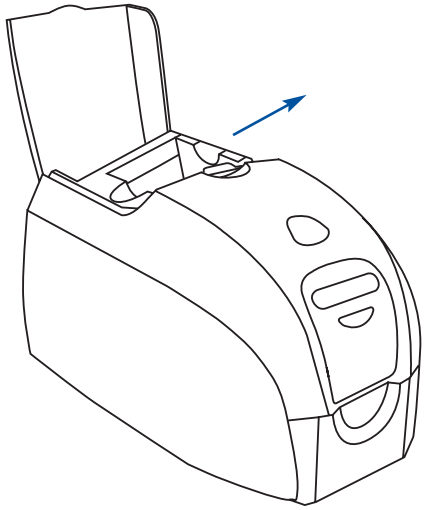
Loading Cards

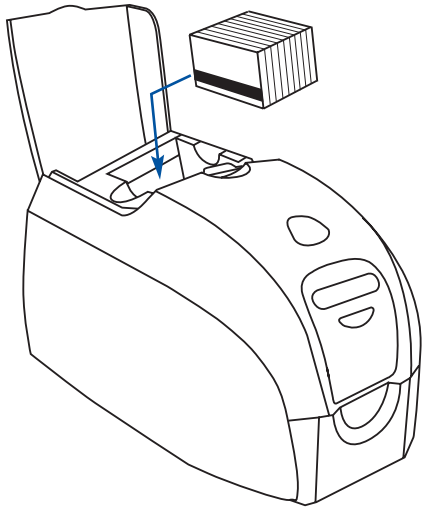
To help you load, print and collect cards, the J120i has a card feeder & output hopper

The card feeder is used for loading cards, it can hold up to 100 (30mil) cards.

Note: DO NOT bend cards or touch print surfaces as this can reduce print quality. The surface of the cards must remain clean and dust free. Always store cards in an enclosed container. Ideally, use cards as soon as possible. If cards stick together, carefully fan or shuffle them.
For cards with magnetic stripe refer to appendix A for loading instructions.

Load cards into card feeder as follows:





1 Open card feeder cover.

2 Slide card guide all the way to the right until it locks in place with an audible click.

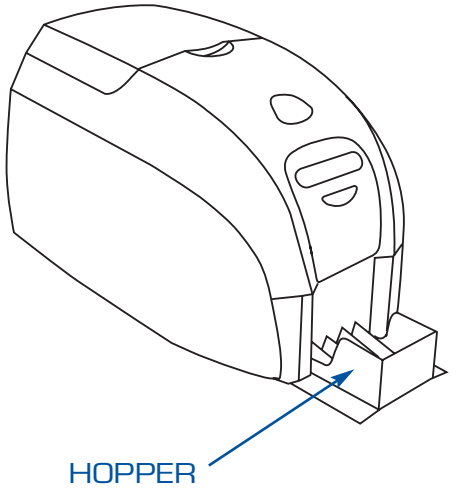
3 Remove wrapper from card stack.

4 Place stack of up to 100 cards into the card feeder and close the cover. When card feeder cover is closed, the card guide locking mechanism will automatically be released.

Card Output Hopper

This item is used for collecting printed cards.

1. Raise the printer lid and pull the hopper down.
2. Return hopper to its closed position when not in use.



Connecting your J120i Printer

Caution: Limit electrical power supplied to the J120i printer to 24 v DC. Limit excess current draw to 16 amps or less, using an associated circuit breaker or other such device. Never operate the printer in a location where operator, computer, or printer can get wet. Personal injury could result. The printer must be connected to an earthed electrical power supply and properly protected against electrical surges and grounding faults. The power supply pack can only be replaced by the same product from the manufacturer.

1. Place the printer in a location that allows easy access to all sides. The printer should never be operated while resting on its side or upside down.

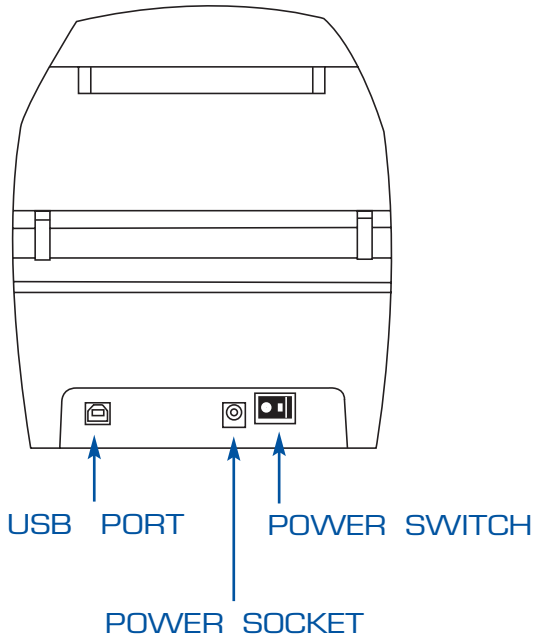
2. Remove the yellow CAUTION label from the back of the printer.

3. Ensure that the printer's power switch in the OFF (O) position.

4. Insert the power supply plug into the power socket, attach the power cord (120v or 230v) to the power supply, then plug the power cord in to a grounded electrical socket of the proper voltage and type.

5. Attach USB cable to printer and computer.

6. Place the printer's power switch in the ON (I) position. The Found New Hardware window will open.



Caution: Intermittent or unpredictable operation may occur from unsecured connectors. If damaged, the power cable must be replaced by an exact equivalent. The socket should always be easily accessible to power off the printer.

Printing a Test Card

With ribbon and cards loaded, your J120i printer is ready to print. To check the operation of the printer, you should print a test card. (Printing a test card does not require that the printer be connected to your computer or network, but power must be applied.)

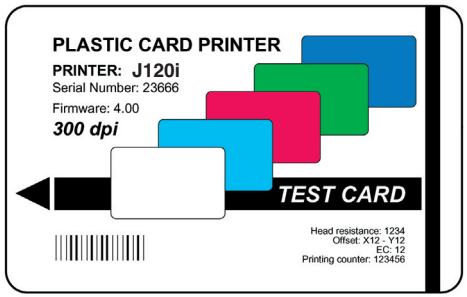
1 Set the printer's power switch (on the back of the printer) to the OFF (O) position.

2 While pressing the printer's front panel button, switch the printer ON (I).

3 Hold the panel button until the LCD display panel reads 'PRINT TEST CARD'.

4 Release the panel button, and the test card will print.

This is an example of the test card:



3 Printing a Card

Printing with the J120i printer requires the Windows Printer Driver, your card design/issuing software or printer command level programming through the printer interface.

The J120i printer can be used with any Windows 2000, or Windows XP software application program, using the drivers provided on CD with the printer. Reference chapter 2 for instructions on installing the J120i printer driver.

Creating a Sample Card

Before you begin a new printing session, print a sample card to ensure that the cards will be printed correctly. Follow the steps below to print your first card using the True Colours™ card printer ribbon cartridge and the Windows printer driver.

1 Go to the Microsoft Word Software.
2 If the J120i printer was not selected as the default printer, go to file> select printer and choose Javelin J120i card printer from the printer names list. Close the print dialog box.
3 Go to file>page setup.
4 Select the size tab, and under paper size, choose card. Under orientation, select landscape or portrait.
5 Select the margins tab, and set the top, bottom, left and right margins to 0 (zero).
6 Press OK to close page setup window.
7 The card appears on the window.
8 Design a card with both black and colored text and with coloured pictures similar to the sample card shown below.

Printing a Sample Card

Once you completed creating your sample card, you are ready to print. Ensure your printer has a True Colours™ card printer ribbon cartridge installed and there are cards in the feeder. Refer to chapter 3 for instructions on installing the ribbon and loading the cards

Print your sample card as follows:

1 Select file>print to open the print dialogue box. Ensure the following settings in the print dialogue box:

Printer name: - Javelin J120i card printer
Print to file: - Unchecked
Page range: - All
Number of copies: - 1
Collate: - Unchecked
Print what?: - Document
Print: - All pages in range
Pages per sheet: - 1 page
Scale to paper size: - No scaling

2 Click the OK button.
3 The printer will feed in a card and start printing. The data download time will vary depending on the complexity of the card design and the processing speed of the computer.
4 Once the printing is completed, the card is ejected from the printer into the card hopper.
5 Remove the sample card and check for any discrepancies. If the sample card is correct, your J120i card printer is ready to produce more cards.

4 Cleaning

Caution: PROTECT YOUR FACTORY WARRANTY!
The recommended maintenance procedures must be performed to maintain your factory warranty. Other than the recommended cleaning procedures described in this manual, allow only Javelin authorized technicians to service the J120i printer.
NEVER loosen, tighten, adjust, or bend, etc. a part or cable inside the printer.
NEVER use a high pressure air compressor to remove particles in the printer.

Your J120i printer includes a simple cleaning system using pre-saturated cleaning cards provided. The regular use of these cards will clean and maintain important parts of your printer that cannot be reached: including printhead, the transport rollers and the magnetic encoder station (optional feature).

When to Clean

After approximately 1000 color cards have been printed, the printer LCD will prompt CLEAN PRINTER, or when print quality has been degraded.

How to Clean

1 Leave power on.

2 Press and hold the control button for 5 seconds.

3 When the cleaning cycle is initiated, the LCD message REMOVE RIBBON THEN CLOSE LID will display.

4 After the ribbon is removed and the lid is closed, the message EMPTY FEEDER THEN CLOSE COVER will display.

5 If the lid is opened and closed without removing the ribbon, the REMOVE RIBBON THEN CLOSE LID message will remain.

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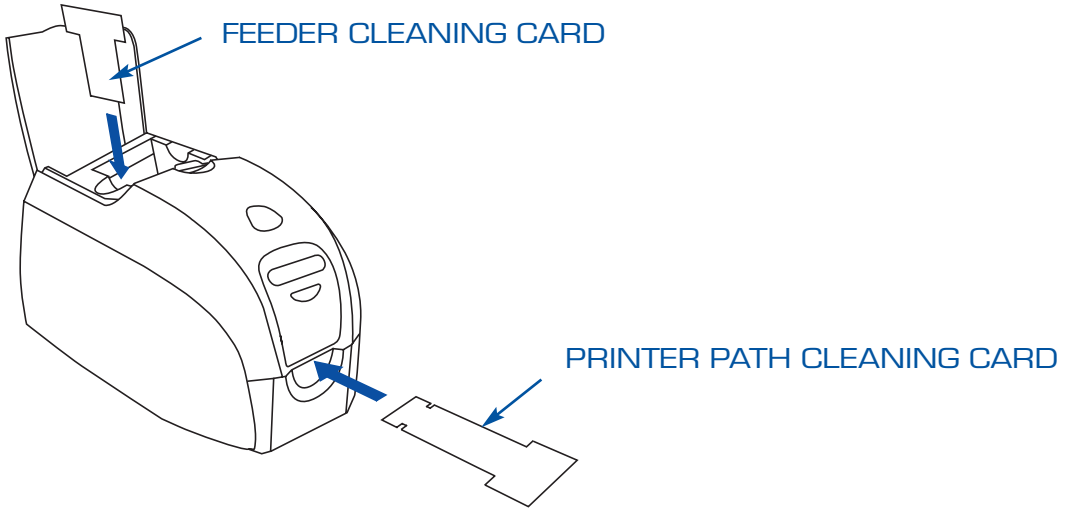
6 Once the cover is closed, the firmware will eject any card inside the printer. The message EJECTING CARD will display.

7 The LCD will then display FEED LONG CLEANING CARD IN EXIT. When the card sensor registers the presence of the cleaning card, the rollers should take the card into the printer.

8 When the cleaning process is done, the printer will eject the cleaning card. If the card sensor still senses the cleaning card, the message REMOVE LONG CLEANING CARD will display.



9 Once the long cleaning card is no longer sensed by the exit card sensor, the message INSERT FEEDER CLEANING CARD will display. Open the feeder cover and insert the feeder cleaning card.

10 When the feeder cleaning card has been sensed by the feeder card sensor, the message CLOSE FEEDER COVER will display.

11 When feeder cleaning is complete, the message REMOVE FEEDER CLEANING CARD will display.

12 After the card is removed, the LCD will display READY.
You may now reload the ribbon and cards and continue printing.

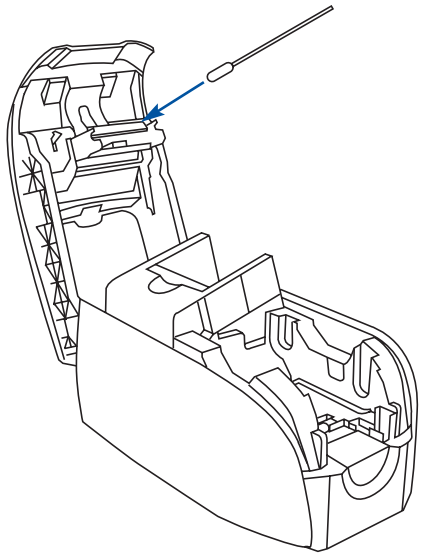
Cleaning the Printhead

Use of the cleaning cards will normally do an adequate job of cleaning the printer. However, a separate printhead cleaning, using swabs, can remove more stubborn deposits when print anomalies persist. To avoid deposits, only use foam-tipped swabs.

Caution: Never use a sharp object to scrape deposits from the printhead. Permanent damage to the print head will result.

Place the printer power switch in the OFF (O) position.

2 Open printer lid by pressing cover release button and open cover fully to reveal printhead mounted to inside of cover.



3 Clean printhead by moving alcohol-moistened swab tip side-to-side across printhead elements. Only use moderate force.

4 Allow two to three minutes for the printhead to dry before placing the printer power switch in the ON (I) position.

5 To reorder swabs, reference the J120i printer media list.

5 Troubleshooting

This section offers solutions to potential problems you may experience with your J120i printer.

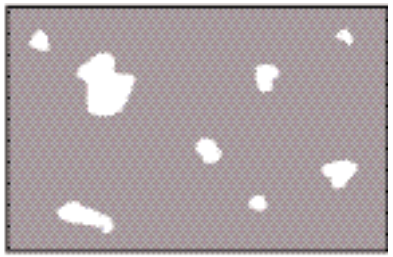
Print Quality Issues

This section will help you resolve print quality problems The print quality is dependent on several factors. The two most important factors that will increase your print quality are cleanliness and card stock. To diagnose and fix print quality problems, follow the troubleshooting procedures below:

Example 1: Small spots appear on the printed card with a non-printed area or a different colour.

Possible Cause: Contamination on the card surface

Solutions: Check that cards are stored in a dust free environment.
Use a different supply of cards.



EXAMPLE 1

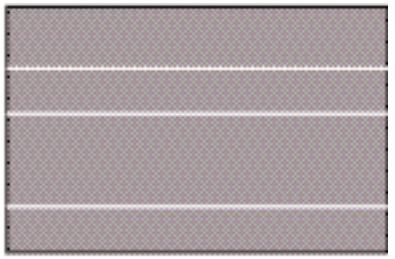
Possible Cause: Cleaning roller not installed.
Dust inside the printer and/or dirty cleaning roller.

Solutions: Perform a cleaning of the printer (ref. chapter 5).
Check that the protective cover was removed from the ribbon cartridge cleaning roller (ref. chapter 3).
If printing one card at a time, replace the cleaning roller located at the front of the printer. (ref. appendix B).

Example 2: There are non-printing horizontal lines (white) on the card surfaces.

Possible Cause: Ribbon cartridge is not correctly positioned.

Solutions: Ensure that the ribbon is properly rolled onto the ribbon cores of the cartridge and that there are no wrinkles in the ribbon.
Replace ribbon cassette.



EXAMPLE 2

Possible Cause: Printhead is dirty.

Solutions: Clean the printhead

Possible Cause: Printhead elements are damaged (e.g. scratched or burnt).

Solutions: Call NBS customer cervice for printhead replacement information.

Example 3: Printing shows very pale or inconsistent results.

Possible Cause: Ribbon cartridge have been stored improperly or is damaged.

Solution: Change ribbon cartridge and print again.

EXAMPLE 3

Possible Cause: Cards may not meet specifications.

Solution: Use a different supply of cards.

Possible Cause: Contrast and/or intensity may be set to values which are too high.

Solution: Adjust contrast and/or Intensity values in software.

Possible Cause: Dust or embedded contamination on elements of the printhead.

Solution: Perform a cleaning of the printhead (Ref. Chapter 4).

Example 4: Printing shows blurry printed image.

Possible Cause: Ribbon cartridge may not be correctly positioned.

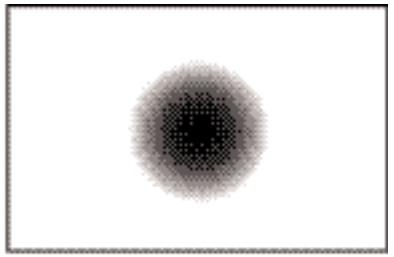
Solution: Check that the ribbon is properly rolled onto the ribbon cores of the cartridge, with no wrinkles.
Replace ribbon cartridge, making sure it locks in place, and print again.

Possible Cause: Ribbon may not be synchronized on the correct colour panel position.

Solution: Open lid, then close lid to synchronize ribbon.

Possible Cause: Cards may not meet specifications.

Solution: Use a different supply of cards.



EXAMPLE 4

Possible Cause: Dust or embedded contamination inside the printer and/or dirty cleaning roller.

Solution: Clean the printhead.
Replace cleaning roller.

Example 5: No printing on the card.

Possible Cause: Ribbon cartridge may not be installed in the printer.

Solution: Check for ribbon cartridge in the printer

Possible Cause: Cards may not meet specifications.

Solution: Use a different supply of cards.

Possible Cause: Cable on printhead may be disconnected.
Printhead elements may be scratched or burnt.

Solution: Call NBS customer cervice for printhead repair or replacement information.

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6 Technical Specifications

General
Integrated card feeder-and-flipper
Load-N-Go™ drop-in ribbon cartridge
16-digit LCD display
Windows® drivers for 2000 and XP

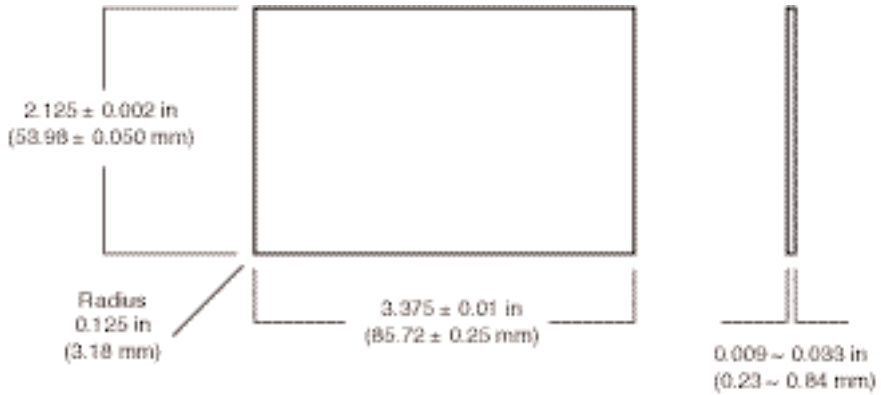
Colour Printing
Colour dye sublimation or monochrome thermal transfer printing
30 seconds per card full colour single sided (YMCKO)
35 seconds per card full colour dual-sided (YMCKOK)
300 dpi (11.8 dots/mm) print resolution

Bar Code
Code 39, Code 128 B & C with & without check digit
2 of 5 & 2 of 5 interleaved
UPC-A, EAN 8 & EAN 13
PDF-417 2D bar code and other symbologies can be printed via Windows drivers

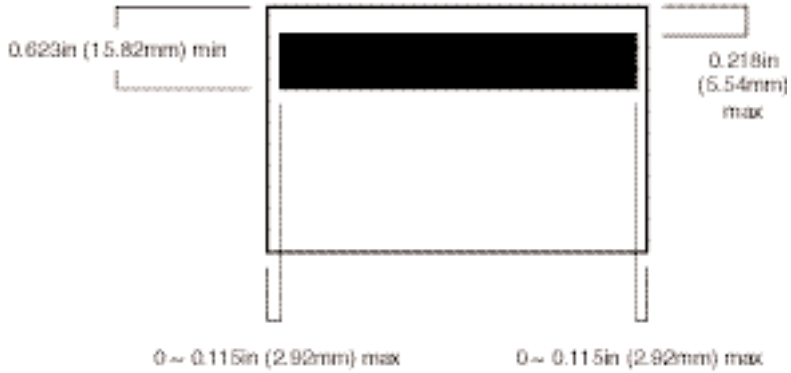
Cards
Types: PVC, PVC composite, adhesive backed
Card width/length: ISO CR-80-ISO 7810, 54mm (2.12") x 86mm (3.38")
Magnetic stripe-ISO 7811
Smart card -ISO 7816-2
Card thickness: 30 mil (.76mm) (+/- 10%)
Card feeder capacity: 100 cards (30 mil)
Card output hopper capacity: 45 cards (30 mil)

Card Dimensions

ISO standard dimensions for plain card:



ISO standard dimensions for magnetic stripe card:



Ribbon Cartridges
Load-N-Go™ ribbon cartridge with integrated card-cleaning roller
i Series technology featuring contact-chip-based ribbon detection
YMCKO: 200 cards/cartridge
YMCKOK: 165 cards/cartridge
Monochrome: 1000 cards/cartridge in black, blue, or white

Interfaces
USB 1.1 (cable included)

Dimensions

Width:	201mm	(7.9”)
Depth:	328mm	(12.9”)
Height:	216mm	(8.5”)
Weight:	4.3kg	(9.5lbs)

Electrical
110 ~ 240 Volts AC, 50 ~ 60 Hz (auto switching)
16MB image memory standard
FCC class B, CE, UL and CUL approved

Environmental
Operating temperature: 60°F to 86°F (15°C to 30°C)
Operating humidity: 20% to 65% non-condensing
Storage temperature: 23°F to 158°F (-5°C to 70°C)
Storage humidity: 20% to 70% non-condensing
Ventilation: Free air

Options
Magnetic encoder (30 mil cards only), 3 track HiCo/LoCo
CardSense™ single card-feed mode
Cleaning kit (4 print engine and 4 feeder cleaning cards)

Appendix A Encoder

Magnetic Card Stripe Encoder

This section contains information on the additional operations of the J120i printers with magnetic card stripe encoder.

Introduction

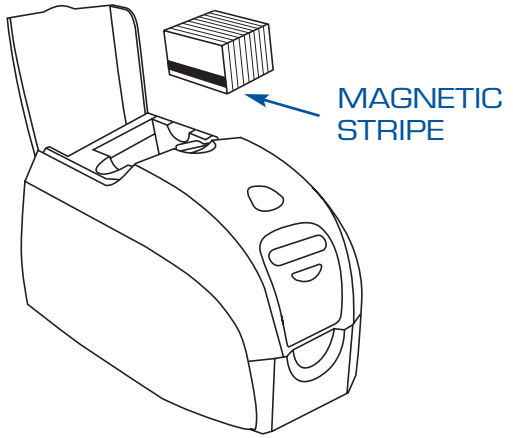
Operation and maintenance requirements for the J120i printer with the optional magnetic card stripe encoder. The magnetic encoder can be set for either high or low coercivity.

Media Loading Orientation

Caution: ONLY USE cards that comply with ISO 7810 & 7811 standards for magnetic stripe cards. The magnetic stripe must be flush to the surface of the card to work properly. Never use cards which have taped-on magnetic stripes.

The magnetic encoder is a factory installed item with the read/write head positioned below the card path, available with HICO or LOCO encoding.

When loading cards with magnetic stripes into the card feeder, please ensure that the magnetic stripe is facing the left side of the printer, and closest to the bottom edge of the card feeder.



Note: NBS approved HICO & LOCO PVC cards are available. (Ref. J120i printer media list).

Magnetic Encoder Cleaning

Use the standard cleaning card process as described in chapter 4. This cleans the most important parts of the printer; including the printhead, transport roller and magnetic stripe encoder.

ISO Standard Encoding

Track #	Field Separator	Track Density	Valid Characters	# of characters
1	^	210 BPI*	Alphanumeric (ASCII 20~95†)	79‡
2	=	75 BPI*	Numeric (ASCII 48~62)	40‡
3	=	210 BPI*	Numeric (ASCII 48~62)	107‡

*Bits per inch

†Except the "?" character

‡Including Start, Stop, and LRC characters. Also note that these 3 characters are automatically managed by the magnetic encoder according to the ISO standard norms.

Note: Refer to the card printer programmer's manual for complete programming information.

Appendix B Single Card Feeding

Card Sense™ Single Card Feed Mode

Printing a single card without using the feeder

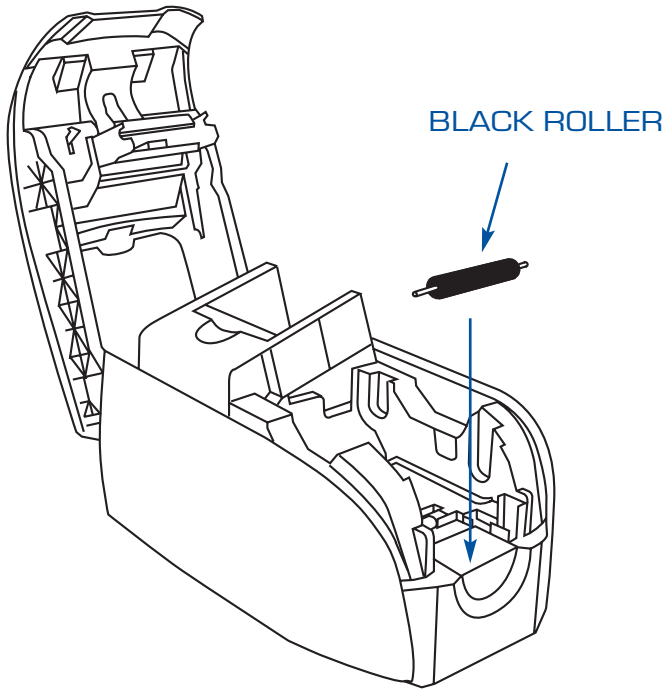
For operating the J120i card printer in single card feed mode, the printer requires that the operator install an optional Card Sense™ single card feed kit. In single card feed mode, the printer will only accept cards through the front slot, not from the card feeder.

To install Card Sense™single card feed kit:

1 Set printer to OFF.

2 Open the lid and remove the ribbon cartridge.

Important: Make sure the output hopper remains closed.



3 Install the black roller from the single card feed kit into the blue tabs at the front of the printer, and press roller down firmly to lock into the tabs.

4 Open the lid of the card cleaning cartridge and insert the cleaning roller.

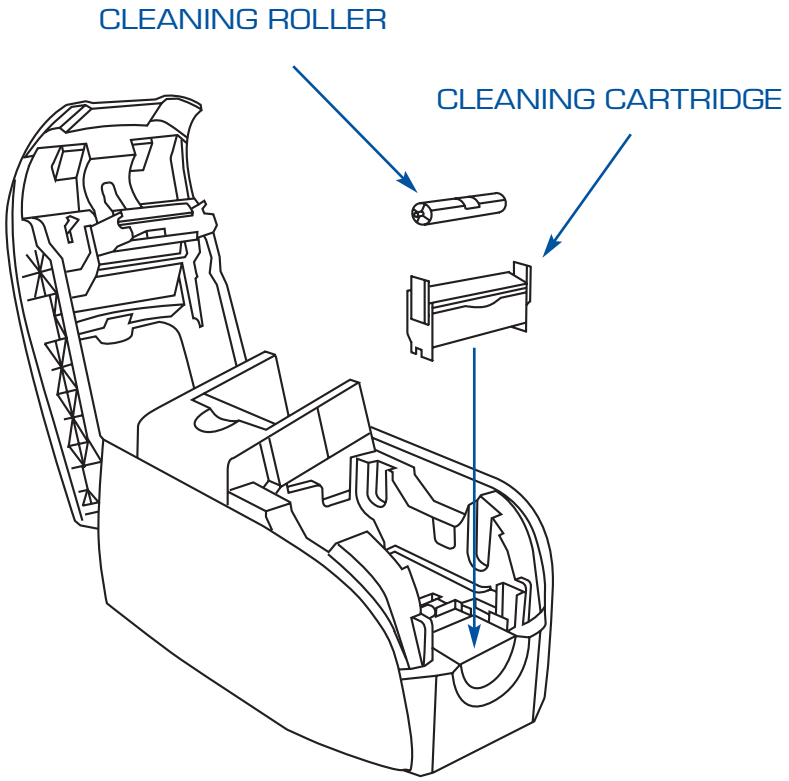
5 Peel protective wrapper from cleaning roller by gently pulling on the blue tape. Discard the wrapper.

6 Slide the card cleaning cartridge into the slots provided at the front of the

printer. An alignment tab is located on the left side of the card cleaning cartridge to ensure proper installation.

7 Replace the ribbon cartridge.

8 Close the printer lid and push down until you hear an audible click.



Setting up the printer driver

1 Go to printer properties

2 Select the device settings tab

3 Select single feed properties

4 Select enable single feed support

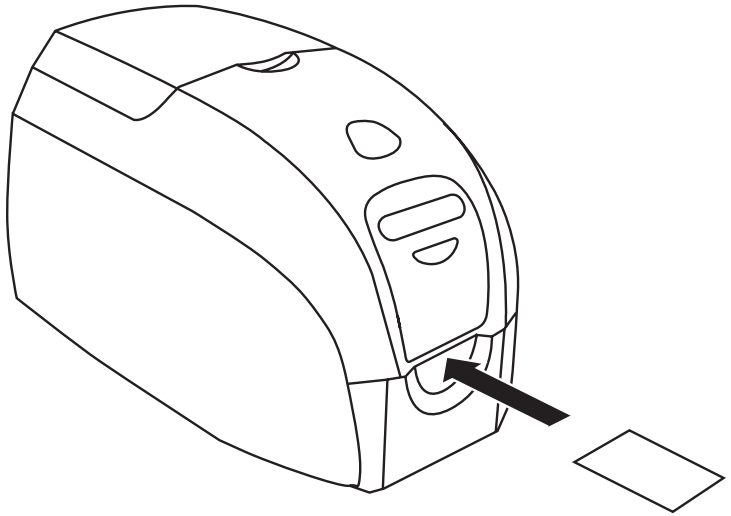
5 Click the apply button.

Important: You can disable single feed support and return to printing cards from the hopper. You do not have to remove the components of the single card feed kit in order to operate in normal mode.

Printing a single card

1 Switch power on.

2 Insert a single card into the slot at the front of the printer, directly above the card output hopper.
The printer will take the card.
Do not feed more than one card at a time.



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Appendix C Accessories & Supplies

Please contact your Javelin dealer to place an order for accessories and supplies.

IMPORTANT NOTICE:

Only TrueColours™ colour ribbon cartridges supplied by Javelin dealers can be used in this printer.

RIBBONS

INTELLIGENT JAVELIN TRUECOLOURS™ ENCODED RIBBONS.

Each cartridge includes a cleaning roller.

NBS part no.		
61133511	YMCKOi	(200 cards)
61133611	YMCKOKi	(165 cards)
61133111	Black	(1000 cards)
61133112	Blue	(1000 cards)
61133113	White	(1000 cards)

Note : Y = Yellow, M = Magenta, C = Cyan, K = Black , O = Overlay

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PLASTIC CARDS (per 1000 cards)

PVC 30 mil (0.76 mm)

92000009	Plain white cards
92000011	Plain white cards (with low coercivity magnetic stripe)
92000007	Plain white cards (with high coercivity magnetic stripe)
9104523-020	Plain white 30 mil 3-up breakaway key tags
92000700	Plain black cards
92000701	Plain silver cards
92000702	Plain gold cards
9104523-121	Plain white security cards with embedded security star opacity mark
9104523-122	Plain white security cards with lock & key colourshift ink image

PVC Composite 60/40 30 mil (0.76 mm)

9104524-101	Plain white cards
9104524-103	Plain white cards (with high coercivity magnetic stripe)
9104524-120	Plain white security cards with embedded world globe hologram design

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OTHER CONSUMABLES

61100906	Printhead (J120i & J110i)
61100922	Cleaning kit: Print engine cleaning cards (4) & feeder cleaning cards (4)
61100916	Cleaning swab kit (25)

ACCESSORIES

2407000	Single card feeder

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Appendix D Warranty Information

PRINTERS

NBS JAVELIN printers (excluding printhead) are warranted against defects in material or workmanship. Proof of purchase or shipment date is required to validate the warranty. This warranty is subject to normal usage and becomes void if the equipment is modified, improperly installed or used, damaged by accident or neglect, or if any parts are improperly installed or replaced by the user.

PRINTHEADS

The original printhead is covered by an unlimited number of passes warranty.
The warranty period begins on purchase date. To qualify for this warranty, the printhead must be returned to NBS or to an authorised dealer. Customers are not required to purchase NBS supplies (media and/or ribbons) for warranty qualification. However, if it is determined that the use of other manufacturers' supplies has caused any defect in the printhead for which a warranty claim is made, the user is responsible for all charges required to repair the defect. The warranty becomes void if the printhead is physically worn or damaged; also if it is determined that failure to follow the preventive maintenance schedule listed in the user's manual has caused defects in the thermal printhead for which a warranty claim is made.

SUPPLIES

These are warranted to be free from defect in material and workmanship provided the user has complied with storage, handling and usage guidelines established for supplies used with NBS Javelin printers.

SPARE PARTS

All parts, maintenance kits, options kits, and accessories are warranted to be free of defects in material and workmanship. This warranty becomes void if the item is modified, improperly installed or used, or damaged by accident or neglect.

Notes: Failure to exercise caution to protect the equipment from electrostatic discharge damage, adverse temperature and humidity conditions or physical abuse, including, but not limited to, improper packaging, shipping, service or repairs performed by personnel not authorised by NBS or an authorised dealer may void the warranty. NBS or its authorised dealer will, at its option, repair or replace the equipment or any parts which are determined to be defective within this warranty period, and which are returned to NBS or its authorised dealer. NBS specifically disclaims the implied warranties of merchantability and fitness for a particular purpose. For full warranty terms, including the length of warrantly period, please contact the Javelin dealer from whom you purchased your printer.

Appendix E Technical Support

If for any reason you require product technical support, please contact the distributor where you purchased your equipment. If they cannot help you, or at their direction, contact NBS.

For support in Europe, Middle East, Africa and Asia Pacific:

NBS TECHNOLOGIES
7 BYFLEET TECHNICAL CENTRE
CANADA ROAD
WEST BYFLEET
SURREY KT14 7NB
UNITED KINGDOM

Tel: +44 1932 351531
Fax: +44 1932 351382

Email: technical.support@nbstech.com.

For support in North and South America:

NBS TECHNOLOGIES
10925 BREN ROAD EAST
MINNEAPOLIS MN 55343
UNITED STATES OF AMERICA

Tel: 1 800 565 9033 or
+1 416 840 8627
Fax: +1 952 912 9439

Email: technical.support@nbstech.com

Web: www.nbstech.com

HOW TO RETURN YOUR PRINTER

If you have purchased your printer from an NBS distributor, please first contact them on their return procedures.

Alternatively, contact the appropriate NBS Technical support department (details above) for instructions before shipping your printer.

Only complete goods in their original packaging with a valid Returned Materials Advice (RMA) number clearly marked on the outside can be accepted for return to NBS.

Appendix F Declarations of Conformity

European Council Directive		Compliance to Standards	
89/336/EEC modified by 92/31/EEC and 93/63/EEC	EMC Directive	EN 55022-B	RF Emissions control
	EMC Directive	EN 500082-1, 1992	Immunity to Electromagnetic Disturbances
73/23/EEC modified by 593/68/EEC	Low voltage Directive	EN 60950	Product Safety

Model: J120i conforms to the following specification:
FCC Part 15, Subpart A, Section 15.107(a) and Section 15.109(a) Class A digital device

Supplemental Information:
This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference , and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:
This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

INDUSTRY CANADA NOTICE

This device complies with Industry Canada ICS-003 class A requirements.

TRADEMARKS

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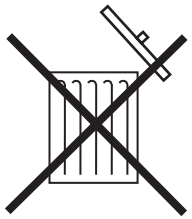
PRODUCT DISPOSAL



Do not dispose this product in unsorted municipal waste.
This product is recyclable and should be recycled accordingly to your local standards.